

CLAIMS

1. An insertion part (100) embodied as a back-flow preventer, which can be used in a gas line or a liquid line, the insertion part comprising a housing (2), and a
5 displaceable sealing body arranged in an interior of the housing which can seal a flow opening of a feeder channel in a closed position, characterized in that the insertion part (100) is provided with an annular lip shaped part (3) having an annular body (6) held inside the housing, and which in an area of the at least one
10 flow opening has at least one sealing lip (14) as the sealing body that can be displaced by the fluid, with a free lip end region that contacts an opposing housing surface in a sealing manner in the closed position.
2. An insertion part (100) according to claim 1, characterized in that a housing core (10) is provided inside the housing, which limits a flow opening between the
15 housing core and an interior circumference of the housing, and that the annular body (6) of the lip shaped part (3) is held at the interior circumference of the housing and in the closed position, the free lip end region contacts the housing core (10) in a sealing manner.
- 20 3. An insertion part (1, 100) which can be inserted into a gas line or a liquid line, embodied as a flow regulator, the insertion part (1, 100) comprising a housing (2), and at least one throttle body or control body arranged in an interior of the housing which limits a control gap, depending on a flow pressure, between itself and an adjacent housing wall, in particular according to claims 1 or 2,
25 characterized in that the insertion part (1, 100) is provided with an annular lip shaped part (3) having an annular body (6) held inside the housing, and which has at least one control lip (9) as the throttle body or control body, and which is aligned with a free lip end region extending in a direction of the adjacent housing wall.

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4. An insertion part (1, 100) according to claim 3, characterized in that the lip shaped part (3) is held with the annular body (6) thereof at an interior circumference of the housing and with the free lip end region of the control lip (9) being aligned in the direction of the adjacent housing wall of a housing core (10).

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5. An insertion part according to one of claims 1 through 4, characterized in that the lip shaped part (3) is provided with at least one upstream control lip (9) and at least one downstream sealing lip (14).

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6. An insertion part according to one of claims 1 through 5, characterized in that the at least one control lip (9) is aligned with its free lip end region extending in an opposite direction to a flow direction (Pfl) of the fluid and limits an annular upstream opening space (11) between the control lip and the interior circumference of the housing.

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7. An insertion part according to one of claims 1 through 6, characterized in that a regulating profiling is provided in the housing wall adjacent to the free lip end of the control lip (9), which comprises grooves or moldings (13) aligned in the flow direction (Pfl).

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8. An insertion part according to claim 7, characterized in that the grooves or moldings (13) are embodied as flow channels open in a direction of a circumference of the housing core.

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9. An insertion part according to one of claims 1 through 8, characterized in that the grooves or moldings (13) are preferably arranged evenly distributed over the circumference of the housing wall, and are ellipsoid, polygon shaped, arc shaped or similarly rounded.

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10. An insertion part according to one of claims 1 through 9, characterized in that the sealing lip (14) is aligned with its free lip end region extending in the flow direction (Pf1).
- 5 11. An insertion part according to one of claims 1 through 10, characterized in that the housing wall has a core section free from grooves and moldings in the area impinged by the sealing lip (14).
- 10 12. An insertion part according to one of claims 1 through 11, characterized in that the lip shaped part (3) is made from an elastic rubber or plastic material.
- 15 13. An insertion part according to one of claims 1 through 12, characterized in that a reaction pressure and reaction behaviors of the control lip (9) and/or the sealing lip (14) are predetermined by a length, a thickness, or similar design and dimensions of the lip(s) (9, 14) and/or by material characteristics of the lip shaped part (3).
- 20 14. An insertion part according to one of claims 1 through 13, characterized in that the housing (2) of the insertion part (1, 100) comprises at least two parts and that the annular lip shaped part (3) is held with the annular body (6) thereof between two adjacent ones of the housing parts (4, 5).
- 25 15. An insertion part according to one of claims 1 through 14, characterized in that the annular body (6) of the lip shaped part (3) comprises a housing part seal for the adjacent housing parts (4, 5).
- 30 16. An insertion part according to claims 1 through 15, characterized in that at least one control and/or sealing lip (9, 14) is provided at the annular body (6) on both sides of the lip shaped part (3) and that the control and/or sealing lips (9, 14) are arranged in an area of an allocated flow opening and/or in an area of a control gap.

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17. An insertion part according to claim 16, characterized in that one control lip (9) and one sealing lip (14) are each provided on opposite sides of the annular body (6) of a preferably generally star shaped or x-shaped lip shaped part (3) and that the lips (9, 14), provided on the opposite sides of the annular body (6), are each allocated to a control gap having at least one downstream flow opening.
18. An insertion part according to one of claims 1 through 15, characterized in that the annular body (6) of the lip shaped part (3) is fastened in a housing chamber between the upstream and the downstream housing parts (4, 5).
19. An insertion part according to claim 18, characterized in that the housing chamber (7) is configured in a closed fashion except for an annular gap and that the annular gap is penetrated by a connecting part (8) of the lip shaped part (3), which connects the annular body (6) to the control and/or sealing lips (9, 14).
20. An insertion part according to one of claims 1 through 19, characterized in that the housing parts (4, 5) adjacent to the lip shaped part (3) can be snapped together.
21. An insertion part according to one of claims 2 through 20, characterized in that in the flow direction (Pfl) a preferably tapering or cone shaped housing core is connected, in particular, in one part to an upstream housing part (4) via at least one radial connection bar (12).

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An insertion part is provided in the form of a back-flow preventer and which can be inserted in a gas or liquid line. An insertion part is also provided that can be inserted into a gas or liquid line in the form of a flow regulator. The insertion parts are

5 characterized in that they comprise an annular lip shaped part which, together with its annular body, is held inside the housing and which has at least one controlling lip (9), with the controlling lip being displaced by the fluid, and/or at least one sealing lip (14). The insertion part can be used in a versatile manner and is characterized by the simple production thereof as well as by having a uniform and reliable functioning.